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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,598	11/25/2003	Chi-Hung Shen	GP-303628	6024
7590 Kathryn A. Marra Mail Code 482-C23-B21 300 Renaissance Center P.O. Box 300 Detroit, MI 48265-3000			EXAMINER TRAN, HANH VAN	
			ART UNIT 3637	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/721,598

Applicant(s)

SHEN ET AL.

Examiner

Hanh V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10-13, 18-20, 24-28 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-13, 18-20, 24-28, 33-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/7/2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Since claim 35 depends on claim 1, the term "said shim" lacks antecedent basis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-5, 10-13, 18-20, 24-28, 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,837,901 to Sola et al.

Sola et al discloses a reconfigurable pallet that supports a structure comprising all the elements recited in the above listed claims including, such as shown in Figs 3-4, a pallet base 5; and a plurality of modular stanchions 10 that are secured to said pallet base 5 and that are selectively positionable along x and y axes relative to a top surface of said pallet base, said modular stanchions each including a support element that has a height along a z axis that is transverse to said x and y axes, said support element supporting said structure, wherein said support element is movable along said z axis to adjust said height; wherein said stanchion base is magnetically secured to the pallet base by magnets 26. Sola also teaches using a fluid cylinder to raise the height of the support element. In regard to a plurality of operation stages of claim 25, since Sola is drawn to "machine tools" operate on a workpiece held the support element, this is interpreted by the examiner to mean that a plurality of operation stages operate on the workpiece held on the support element. The differences being that Sola et al does not disclose the modular stanchions adhesively bonded to the pallet base using a bonding pack which includes means for removing the modular stanchion from the pallet base coupled to the bottom of the stanchion base via an adhesive layer or a shim bonded to the bottom of the modular stanchion via a quick de-bonding adhesive layer, and a quick-

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bonding adhesive layer providing an interfacial joint between said modular stanchion and the pallet base, wherein said stanchion base and said shim are electrically conductive, a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within the support cylinder to move the support element along the z axis, the method of assembling as recited in claims 18-20, 24.

In regard to the modular stanchions adhesively secured to the pallet base by an adhesive layer using a bonding pack, which includes means for removing the modular stanchion from the pallet base coupled to the bottom of the stanchion base via an adhesive layer or a shim bonded to the bottom of the modular stanchion via a quick debonding adhesive layer, and a quick-bonding adhesive layer providing an interfacial joint between said modular stanchion and the pallet base, wherein said stanchion base and said shim are electrically conductive, it is well known in the art to use various, well known equivalent and commercially available securing means, such as screws, bolts, nails, magnets and adhesive layer to secure one object to another as a matter of engineering choice; therefore, it would have been obvious and well within the level of one skill in the art to modify the structure of Sola et al by having the modular stanchions secured to the pallet base by a well known securing means, such as an adhesive layer using a bonding pack.

Since Sola also teaches using a fluid cylinder to raise the height of the support element, and since it is well known in the art to use either hydraulic or pneumatic to raise the support element, it would have been obvious and well within the level of one skill in the art to modify the structure of Sola et al by providing a hydraulic pump in fluid

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communication with said support cylinder and operable to adjust a hydraulic pressure within the support cylinder to move the support element along the z axis.

Since Sola et al, as modified, discloses all the elements recited in the method claims, it would have been obvious and well within the level of one skill in the art to perform the method assembly as recited in claims 18-20 and 24.

Response to Arguments

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sarh, Crocker et al, Collier et al, Riley et al, Ercole et al all show structures similar to various elements of applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh V. Tran whose telephone number is (571) 272-6868. The examiner can normally be reached on Monday-Thursday, and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HVT

February 5, 2007



Hanh V. Tran

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